Alchip® MVA Series

- ϕ4 through ϕ18 case sizes are fully lined up
- Endurance : 85℃ 2000 hours
- Suitable to fit for downsized equipment
- Solvent-proof type except 100 to 450Vdc (see PRECAUTIONS AND GUIDELINES)
- Pb-free design

MVA
↑ downsized size extended
MV

◆SPECIFICATIONS

Items	Characteristics												
Category Temperature Range	−40 to +85℃												
Rated Voltage Range	4 to 450Vdc												
Capacitance Tolerance	±20% (M)												(at 20℃, 120Hz)
Leakage Current	Rated voltage (Vdc)	4 to 100V						160 to 450V					
	D55 to JA0	I=0.01CV or 3μA, whichever is greater.(after 2 minutes)						—					
	KE0 to MN0	I=0.03CV or 4μA, whichever is greater.(after 1 minute)						I=0.04CV+100μA max.(after 1 minute)					
	Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V)												(at 20℃)
Dissipation Factor (tanδ)	Rated voltage (Vdc)		4V	6.3V	10V	16V	25V	35V	50V	63V	100V	160 to 250V	400 & 450V
	tanδ (Max.)	D55 to JA0	0.42	0.35	0.30	0.26	0.16	0.14	0.12	0.12	0.12	—	—
		KE0 to MN0	—	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.20	0.25
	When nominal capacitance exceeds 1000μF, add 0.02 to the value above for each 1000μF increase.												(at 20℃, 120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (Vdc)		4V	6.3V	10V	16V	25V	35V	50V	63V	100V	160 to 250V	400 & 450V
	D55 to JA0	Z(−25℃)/Z(+20℃)	7	4	3	2	2	2	2	2	3	—	—
		Z(−40℃)/Z(+20℃)	17	10	8	6	4	3	3	3	4	—	—
	KE0 to MN0	Z(−25℃)/Z(+20℃)	—	5	4	3	2	2	2	2	2	3	6
		Z(−40℃)/Z(+20℃)	—	12	10	8	5	4	3	3	3	6	10 (at 120Hz)

Endurance

The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 2000 hours at 85℃.

Size code	D55 to JA0	D55 to JA0	KE0 to MN0
Rated voltage (Vdc)	4V & 6.3V	10 to 100V	6.3 to 450V
Capacitance change	≦±30% of the initial value	≦±20% of the initial value	
DF (tanδ)	≦200% of the initial specified value	≦200% of the initial specified value	
Leakage current	≦The initial specified value	≦The initial specified value	

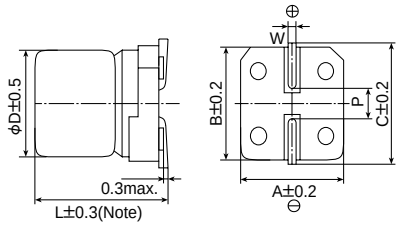
Shelf Life

The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1000 hours at 85℃ without voltage applied.

Size code	D55 to JA0	D55 to JA0	KE0 to MN0
Rated voltage	4V & 6.3V	10 to 100V	6.3 to 450V
Capacitance change	≦±30% of the initial value	≦±20% of the initial value	
DF (tanδ)	≦200% of the initial specified value	≦200% of the initial specified value	
Leakage current	≦The initial specified value	≦The initial specified value	

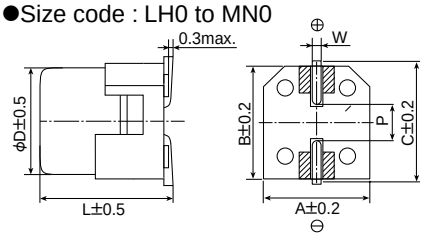
◆DIMENSIONS [mm]

- Terminal Code : A
- Size code : D55 to KG5



Note : L±0.5 for HA0 to KG5

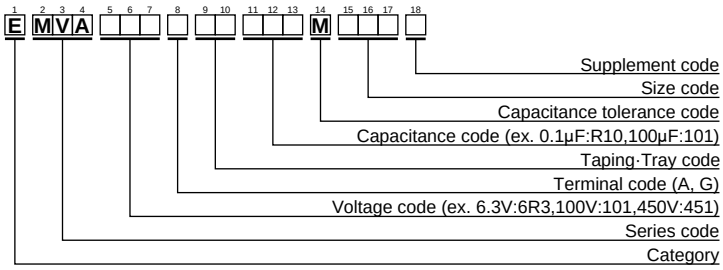
- Terminal Code : G
- Size code : LH0 to MN0



: Dummy terminals

Size code	D	L	A	B	C	W	P
D55	4	5.2	4.3	4.3	5.1	0.5 to 0.8	1.0
E55	5	5.2	5.3	5.3	5.9	0.5 to 0.8	1.4
F55	6.3	5.2	6.6	6.6	7.2	0.5 to 0.8	1.9
F60	6.3	5.7	6.6	6.6	7.2	0.5 to 0.8	1.9
F80	6.3	7.7	6.6	6.6	7.2	0.5 to 0.8	1.9
HA0	8	10.0	8.3	8.3	9.0	0.7 to 1.1	3.1
JA0	10	10.0	10.3	10.3	11.0	0.7 to 1.1	4.5
KE0	12.5	13.5	13.0	13.0	13.7	1.0 to 1.3	4.2
KG5	12.5	16.0	13.0	13.0	13.7	1.0 to 1.3	4.2
LH0	16	16.5	17.0	17.0	18.0	1.0 to 1.3	6.5
LN0	16	21.5	17.0	17.0	18.0	1.0 to 1.3	6.5
MH0	18	16.5	19.0	19.0	20.0	1.0 to 1.3	6.5
MN0	18	21.5	19.0	19.0	20.0	1.0 to 1.3	6.5

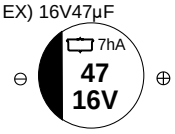
◆PART NUMBERING SYSTEM



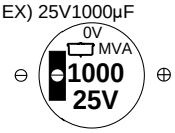
Please refer to "A guide to global code (surface mount type)"

◆MARKING

D55 to JA0
EX) 16V47μF



KE0 to HN0
EX) 25V1000μF



Alchip® MVA Series

◆STANDARD RATINGS

□ is non solvent-proof.

WV (Vdc)	Cap (μF)	Size code	tanδ	Rated ripple current (mArms/ 85℃,120Hz)	Part No.
4	33	D55	0.42	25	EMVA4R0ADA330MD55G
	47	D55	0.42	30	EMVA4R0ADA470MD55G
	100	E55	0.42	50	EMVA4R0ADA101ME55G
	220	F55	0.42	80	EMVA4R0ADA221MF55G
	330	F80	0.42	135	EMVA4R0ADA331MF80G
	470	F80	0.42	150	EMVA4R0ADA471MF80G
	1000	HA0	0.42	320	EMVA4R0ADA102MHA0G
6.3	33	D55	0.35	30	EMVA6R3ADA330MD55G
	47	D55	0.35	33	EMVA6R3ADA470MD55G
	100	E55	0.35	55	EMVA6R3ADA101ME55G
	220	F55	0.35	88	EMVA6R3ADA221MF55G
	330	F80	0.35	135	EMVA6R3ADA331MF80G
	470	HA0	0.35	280	EMVA6R3ADA471MHA0G
	680	HA0	0.35	290	EMVA6R3ADA681MHA0G
	820	HA0	0.35	320	EMVA6R3ADA821MHA0G
	1000	JA0	0.35	430	EMVA6R3ADA102MJA0G
	1500	JA0	0.35	480	EMVA6R3ADA152MJA0G
	2200	KE0	0.40	890	EMVA6R3A□□222MKE0S
	3300	KG5	0.42	1000	EMVA6R3A□□332MKG5S
	3300	LH0	0.42	1200	EMVA6R3GTR332MLH0S
	4700	LH0	0.44	1400	EMVA6R3GTR472MLH0S
	6800	LN0	0.48	1750	EMVA6R3GTR682MLN0S
	6800	MH0	0.48	1700	EMVA6R3GTR682MMH0S
	10000	MN0	0.56	2000	EMVA6R3GTR103MMN0S
10	22	D55	0.30	26	EMVA100ADA220MD55G
	33	D55	0.30	30	EMVA100ADA330MD55G
	47	E55	0.30	44	EMVA100ADA470ME55G
	100	F55	0.30	70	EMVA100ADA101MF55G
	150	F55	0.30	79	EMVA100ADA151MF55G
	220	F80	0.30	130	EMVA100ADA221MF80G
	330	HA0	0.30	270	EMVA100ADA331MHA0G
	470	HA0	0.30	280	EMVA100ADA471MHA0G
	1000	JA0	0.30	430	EMVA100ADA102MJA0G
	2200	KE0	0.36	960	EMVA100A□□222MKE0S
	3300	LH0	0.38	1300	EMVA100GTR332MLH0S
	4700	LN0	0.40	1550	EMVA100GTR472MLN0S
	4700	MH0	0.40	1600	EMVA100GTR472MMH0S
	6800	MN0	0.44	1850	EMVA100GTR682MMN0S
16	22	D55	0.26	26	EMVA160ADA220MD55G
	33	E55	0.26	37	EMVA160ADA330ME55G
	47	E55	0.26	44	EMVA160ADA470ME55G
	100	F55	0.26	70	EMVA160ADA101MF55G
	150	F80	0.26	110	EMVA160ADA151MF80G
	220	F80	0.26	130	EMVA160ADA221MF80G
	330	HA0	0.26	270	EMVA160ADA331MHA0G
	470	HA0	0.26	280	EMVA160ADA471MHA0G
	680	JA0	0.26	380	EMVA160ADA681MJA0G
	1000	KE0	0.30	710	EMVA160A□□102MKE0S
	2200	LH0	0.32	1150	EMVA160GTR222MLH0S
	3300	LN0	0.34	1450	EMVA160GTR332MLN0S
	3300	MH0	0.34	1450	EMVA160GTR332MMH0S
	4700	MN0	0.36	1750	EMVA160GTR472MMN0S
25	10	D55	0.16	24	EMVA250ADA100MD55G
	22	E55	0.16	41	EMVA250ADA220ME55G
	33	E55	0.16	47	EMVA250ADA330ME55G
	47	F55	0.16	60	EMVA250ADA470MF55G
	56	F55	0.16	66	EMVA250ADA560MF55G
	100	F80	0.16	120	EMVA250ADA101MF80G
	150	HA0	0.16	210	EMVA250ADA151MHA0G
	220	HA0	0.16	260	EMVA250ADA221MHA0G
	330	HA0	0.16	300	EMVA250ADA331MHA0G
	470	JA0	0.16	400	EMVA250ADA471MJA0G
	1000	KE0	0.26	820	EMVA250A□□102MKE0S
	2200	LN0	0.28	1450	EMVA250GTR222MLN0S
	2200	MH0	0.28	1400	EMVA250GTR222MMH0S
	3300	MN0	0.30	1800	EMVA250GTR332MMN0S
35	4.7	D55	0.14	18	EMVA350ADA4R7MD55G
	10	D55	0.14	24	EMVA350ADA100MD55G
	22	E55	0.14	41	EMVA350ADA220ME55G
	33	F55	0.14	54	EMVA350ADA330MF55G
	47	F60	0.14	64	EMVA350ADA470MF60G
	100	F80	0.14	120	EMVA350ADA101MF80G

WV (Vdc)	Cap (μF)	Size code	tanδ	Rated ripple current (mArms/ 85℃,120Hz)	Part No.
35	150	HA0	0.14	210	EMVA350ADA151MHA0G
	220	HA0	0.14	260	EMVA350ADA221MHA0G
	330	JA0	0.14	360	EMVA350ADA331MJA0G
	470	KE0	0.22	600	EMVA350A□□471MKE0S
	1000	LH0	0.22	1100	EMVA350GTR102MLH0S
	2200	MN0	0.24	1700	EMVA350GTR222MMN0S
50	3.3	D55	0.12	15	EMVA500ADA3R3MD55G
	4.7	D55	0.12	18	EMVA500ADA4R7MD55G
	10	E55	0.12	30	EMVA500ADA100ME55G
	22	F55	0.12	47	EMVA500ADA220MF55G
	33	F80	0.12	70	EMVA500ADA330MF80G
	47	F80	0.12	85	EMVA500ADA470MF80G
	100	HA0	0.12	190	EMVA500ADA101MHA0G
	220	JA0	0.12	320	EMVA500ADA221MJA0G
	330	KE0	0.18	600	EMVA500A□□331MKE0S
	470	KG5	0.18	740	EMVA500A□□471MKG5S
	470	LH0	0.18	850	EMVA500GTR471MLH0S
	1000	LN0	0.18	1300	EMVA500GTR102MLN0S
	1000	MN0	0.18	1400	EMVA500GTR102MMN0S
63	0.10	D55	0.12	1.3	EMVA630ADAR10MD55G
	0.22	D55	0.12	3.0	EMVA630ADAR22MD55G
	0.33	D55	0.12	4.0	EMVA630ADAR33MD55G
	0.47	D55	0.12	5.0	EMVA630ADAR47MD55G
	1.0	D55	0.12	8.0	EMVA630ADA1R0MD55G
	2.2	D55	0.12	12	EMVA630ADA2R2MD55G
	3.3	E55	0.12	17	EMVA630ADA3R3ME55G
	4.7	E55	0.12	20	EMVA630ADA4R7ME55G
	10	F55	0.12	32	EMVA630ADA100MF55G
	22	F80	0.12	60	EMVA630ADA220MF80G
	33	HA0	0.12	110	EMVA630ADA330MHA0G
	47	HA0	0.12	130	EMVA630ADA470MHA0G
	56	JA0	0.12	160	EMVA630ADA560MJA0G
	68	JA0	0.12	170	EMVA630ADA680MJA0G
	100	KE0	0.14	380	EMVA630A□□101MKE0S
	220	KE0	0.14	580	EMVA630A□□221MKE0S
	330	KG5	0.14	720	EMVA630A□□331MKG5S
	330	LH0	0.14	820	EMVA630GTR331MLH0S
	470	LH0	0.14	950	EMVA630GTR471MLH0S
	470	MH0	0.14	1000	EMVA630GTR471MMH0S
100	22	HA0	0.12	90	EMVA101ADA220MHA0G
	33	JA0	0.12	120	EMVA101ADA330MJA0G
	68	KE0	0.10	380	EMVA101A□□680MKE0S
	100	KE0	0.10	440	EMVA101A□□101MKE0S
	220	LN0	0.10	850	EMVA101GTR221MLN0S
	220	MH0	0.10	800	EMVA101GTR221MMH0S
	330	MN0	0.10	1000	EMVA101GTR331MMN0S
160	47	KG5	0.20	370	EMVA161A□□470MKG5S
	68	LH0	0.20	500	EMVA161GTR680MLH0S
	100	LN0	0.20	590	EMVA161GTR101MLN0S
	100	MH0	0.20	590	EMVA161GTR101MMH0S
200	22	KE0	0.20	240	EMVA201A□□220MKE0S
	33	KG5	0.20	310	EMVA201A□□330MKG5S
	47	LH0	0.20	420	EMVA201GTR470MLH0S
	68	LN0	0.20	510	EMVA201GTR680MLN0S
	68	MH0	0.20	510	EMVA201GTR680MMH0S
	100	MN0	0.20	590	EMVA201GTR101MMN0S
250	10	KE0	0.20	150	EMVA251A□□100MKE0S
	22	KG5	0.20	240	EMVA251A□□220MKG5S
	33	LH0	0.20	340	EMVA251GTR330MLH0S
	47	LN0	0.20	420	EMVA251GTR470MLN0S
	47	MH0	0.20	420	EMVA251GTR470MMH0S
	68	MN0	0.20	490	EMVA251GTR680MMN0S
400	4.7	KE0	0.25	120	EMVA401A□□4R7MKE0S
	10	LH0	0.25	140	EMVA401GTR100MLH0S
	22	LN0	0.25	280	EMVA401GTR220MLN0S
	22	MH0	0.25	280	EMVA401GTR220MMH0S
	33	MN0	0.25	350	EMVA401GTR330MMN0S
450	4.7	KE0	0.25	120	EMVA451A□□4R7MKE0S
	10	LH0	0.25	140	EMVA451GTR100MLH0S
	22	LN0	0.25	280	EMVA451GTR220MLN0S
	33	MN0	0.25	350	EMVA451GTR330MMN0S

□□ : Taping / Tray code